

Remarks

The Examiner has objected to claim 6. In the papers faxed on June 12, 2006, claim 6 did have 'if necessary'. However, during transmission the 'i' may not have faxed well. Nevertheless to expedite matters, claim 6 has been amended.

The Examiner has rejected claims 1-11 under 35 USC § 103(a) as being unpatentable over Toshisuke et al (JP11-124531) in view of Mineo et al (JP 08-044066).

The applicants have amended claims 3 and 6. New claim 12 has been added. No new matter has been added.

Claim 1 refers to an anti-reflective coating composition which comprises a fluorine-containing polymer, an acid, an amine and an aqueous solvent capable of dissolving these components, further where the coating composition has a pH ranging from about 1.0 to about 6.0, and further where the fluorine-containing polymer is a polymer comprising a polymer unit represented by the following general formula (I),



wherein R_f represents a straight or branched perfluoroalkyl group which may optionally contain an etheric oxygen atom.

The Examiner has stated Toshisuke et al **do not teach** an acid in the composition and Mineo et al teach a mixture of water and organic solvent such as low-grade alkyl carboxylic acid such as acetic acid.

Mineo discloses a fluorinated system as an antireflective coating but the materials exemplified are not soluble as shown in the previously submitted Declaration and in the new Declaration being submitted by the applicants. In the new Declaration another fluorinated material, perfluoro-3,6,9-trioxadecanoic acid, taught by Mineo et al was mixed with water and it too failed to dissolve in water. It seems Mineo et al have not been able to teach their invention at all, and even when the materials were insoluble in water they did not add an organic solvent to make the materials soluble. Furthermore, they have disclosed acetic acid as a cosolvent but failed to appreciate that it could be added to the materials.

In fact, Mineo et al teach away from the use of acidic solutions because in one of their own invention related to similar fluorinated top antireflective coating compositions, US 5,611,850, priority application filed March 23, 1995, they state in column 4, lines 18-20, "since if an acidic compound is used, an apparatus tends to be corroded thereby." Thus Mineo et al teach away from the use of an acidic composition in US 5, 611,850 to prevent equipment corrosion, and in JP JP11-124531 Mineo et al have not been able to show a system that is soluble. Mineo did not use acetic acid because the use of an acid was not desirable according to the state of art at that time. There is no motivation in the state of the art at that time to add an acid to the fluorinated antireflective coating solution, rather the opposite. Similarly, US 5,631,314 teaches away from using acidic solutions as discussed in the response dated May 11, 2006. Thus there is no teaching in the prior art that requires that the pH of the solution be in the range from about 1.0 to about 6.0, as taught in the present invention. Therefore, the Examiner is requested to remove the Mineo references from the rejection.

Claim 3 has been amended and has support on page 8, lines 4-15.

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New claim 12 has been added and support is on page 8, lines 4-15.

In view of the above remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, he is requested to contact the agent for Applicants at the telephone number provided below.

Respectfully submitted,



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